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12 November 1981

NIO/SP Contribution for "Contingencies" Studies

1. Prospects for Soviet Near-Term Technological "Break-throughs." There are areas of military-related technologies where the Soviets have obvious deficiencies or where they are devoting considerable efforts, but where, in the judgment of the intelligence community, the application to deployed systems is at least a decade or more away, if feasible at all. Only limited attention is paid to the implications for US military posture if the Soviets were to achieve near-term break-throughs in these technologies, and were able to apply them to military uses. Thus, "contingency" papers on this issue would assume that the Soviets achieved in this decade the requisite level of technology for military applications in selected areas.

Some general questions that would be addressed in such studies are:

- (a) What would be the technical characteristics and capabilities of these "advanced" weapons or military support systems?
- (b) What levels of deployment could be achieved, assuming the anticipated Soviet military production and supporting infrastructure in the 1980s and beyond? How could such systems be configured?
- (c) What would be the implications for US systems; how could the Soviets protect these systems from US attacks; other counter-measures (a general evaluation; a detailed analysis of this question would have to involve DoD.)

Some candidate topics for such studies in the strategic area are:

- (a) Soviet "space-warfare." Assumes a major change in Soviet space posture in the early-to-mid 1990s, based upon unexpected technological achievements in the 1980s:
 - Space-based lasers and other directed-energy systems for land and space (ASAT) attack.
 - Space-based ABM; air defense.
 - Space-based weapons.
 - Extensive capabilities for space-based surveillance and tracking of US bomber force, missile-carrying aircraft, command and control aircraft.

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- (b) Soviet ASW. Assumes a Soviet capability by the early 1990s to locate, track, and destroy a substantial portion of US SSBNs in the open-ocean, even in the face of Trident II deployment, and its greater "search-area" requirements. Significant improvements that could arise from Soviet use of space, breakthroughs in non-acoustic ASW.

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2. Soviet Military Capabilities vs. Technological Advances. This study would address the question of whether more advanced weapon systems are necessarily more capable systems? That is, will some Soviet military capabilities suffer as they incorporate more advanced technology into their weapon systems? To be worthwhile, this topic probably would have to be treated in a series of papers on specific Soviet military forces and capabilities (e.g., ground forces, the SRF, SSBNs, etc.). In any case, such a study would examine the ability of the Soviet military force in question to cope with the more difficult operational and maintenance problems attendant with advanced technologies.

Topics covered could include:

- (a) Deployment levels. Will more advanced systems necessarily result in lower levels of deployment for such systems because of cost and maintenance problems?
- (b) Capabilities for support. In addition to maintenance problems, will the Soviet military production and support system be able to keep these more advanced forces equipped with necessary spare parts and components?
- (c) Demographic Trends. Will the changing personnel composition of the Soviet armed forces, with attendant differences in language and education levels, exacerbate problems associated with the introduction of advanced technology?
- (d) Geographic considerations. To what extent will the varying geographical and climatic conditions in the USSR degrade the overall performance of advance weapons? How will the Soviets adapt these systems to these varying conditions?

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